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ABSTRACT

The research reports listed here comprise the responses received by the Stanford University Child Language Project to a general request for reports on current research in progress. A brief resume of each report is given here, and those resumes which were substantially edited by the project are identified by (STAFF). Each resume presents in order the following information: research area, language, subjects/informants, ages, theoretical issues, abstract. These labels are provided and underlined in the first abstract, but omitted from the subsequent ones for the sake of brevity. (Author/PMP)

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CURRENT CHILD LANGUAGE RESEARCH RÉSUMÉS

The following research reports comprise the responses received by the Project to a general request for reports on current research in progress. Those résumés which were substantially edited by the Project in order to shorten the original report are identified by [staff]. The résumés present, in order, the following information: research area, language, subjects, informants, ages, theoretical issues, abstract. These labels are provided and underlined in the first abstract, although omitted from the subsequent ones for the sake of brevity.

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Papers and Reports on Child Language Development
April, 1974

PPEL, René. Institute for Developmental Psychology, State University, Varhenmarht 2, Utrecht, Holland. Research area: Syntax and cognition. Language: Dutch. Subjects/Informants: 22. Ages: 4-6. Theoretical issues: Comprehension of sentences with two prepositional modifiers by four- to six-year-old children.

In a pilot-experiment we studied whether four- to six-year-old children could fully comprehend sentences with two prepositional modifiers. Two sorts of sentences describing tasks which the children had to carry out were used. These sentences had two possible interpretations but were disambiguated by the experimental situation. Contrary to our expectations, the sentences with two co-ordinated adverbial constituents were more difficult than sentences with one adverbial and one adjectival constituent, especially for the youngest children tested. Theoretically, the second type is more complex than the first, since the adjectival prepositional phrase must be derived from a relative clause (i.e. an extra sentence) in the deep structure. We conclude tentatively that a cognitive factor explains our results; many children in the age range four to six have not yet mastered the concept 'an object can be placed next to two things simultaneously.'

NDERSON, Lloyd B. Linguistics, University of Colorado, Boulder, Colorado 80302.

This research concerns micro-processes in learning through two routes. First, to find those longitudinal studies which offer greatest hope of isolating minimal units in the building of grammars; second, to compare the processes assumed for this building process with processes operating elsewhere in language change. The study deals with two processes in particular: 1) the ousting of a regularized form by an irregular one involves two stages, the learning of the irregular, and later the blocking of the regular; 2) Frequent juxtaposition leading to formation of new grammatical units. Process (1) is illustrated from morphology and from syntax in children, most interestingly, some rare productions by a child reported by Bellugi-Klima; a comparison with morphological analogy is of interest. Process (2) produces the clitic pronouns of Gruber's Mackie and in historical change (Romance); it also produces larger sentence-constructions from the juxtaposition of "topic" with "comment." [Staff.]

ARRAGER, Diane. Rm. R-123, Medical Center, Stanford University, Stanford, California 94305. 24 4-week-old infants, 24 12-week-old infants.

The present investigation was designed to answer the question: do normal infants aged four and twelve weeks react differently to speech than to nonspeech stimuli. The techniques used to identify responses were behavioral observations and heart rate measurements. The speech stimuli were the words, "baba" and "papa," recorded by the author. The two nonspeech stimuli were created by "filling" the time-amplitude envelope of each word with an amplitude modulated pulse train. The nonspeech stimuli were analogous to their corresponding speech samples in pitch, amplitude, and time, but were heard as two-syllable noises.

There was an equal number of males and females in each age group. Within each age-sex group, half of the subjects were in an alert state and half were in a non-alert state at the time of stimulus onset.

Results revealed no difference in responses of infants aged four and twelve weeks to speech and nonspeech stimuli. This finding does not rule out the possibility that infants in these age groups do respond differently to stimuli having certain characteristics of speech than to other stimuli. It is also plausible that other methods of measuring response might have yielded dissimilar responses to the two stimuli. Further study with modifications in stimuli and response measurement techniques are currently being considered. An investigation similar to that reported is currently in progress with older infants as subjects. [Staff.]

BATES, Elizabeth. 410 West Point Court, St. Louis, Mo. 63130. Pragmatics, semantics and cognitive development. Italian. 80. 2 - 6 years. Role of cognition as a prerequisite to pragmatic manipulation of language.

1. Conditional verbs: Italian children do not master counterfactual conditional verbs until around 5-1/2 years, at a time corresponding to Piaget's stage of concrete operations. Prior to that time, from 3-1/2 - 5 subjects use "pseudoconditionals" -- e.g. imperfect past or future tense -- to approximate the true conditions of counterfactuals. Prior to 3-1/2, responses are in present indicative. Mastery of the counterfactual presupposition runs parallel to a shift from irreversible operations to reversible operations as the child passes into the concrete operational stage.

2. Polite forms: A task in which the child must choose the "nicer" of two requests yields an order of acquisition of polite forms equivalent to the order found in longitudinal records. "Please" and intonation items are discriminated first, conditionals and formal address are not discriminated significantly until 5-1/2. An ability to reason about "why is that one nicer" starts around 5 years of age.

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3. Word order: Evidence from longitudinal records and from experiments indicates that pragmatic factors -- emphasis and topicalization -- play an essential role in acquisition of word order by Italian children.

BELLUGI, Ursula, Susan FISCHER, and Penny BOYES-BRAEM. The Salk Institute, P. O. Box 1809, San Diego, CA 92112. Language development in another mode; basic principles of language acquisition. American Sign Language. 2 - 5 years. Principles of language learning which hold across modalities; aspects of language learning which may be particular to the modality in which language occurs.

We have investigated American Sign Language, and its grammatical operations and processes. We find that a visual-gestural system relies on spatial mechanisms, and on simultaneous modifications of its parameters, rather than on order of elements in a string or inflectional suffixation. Fischer has specified the precise nature of operations on verbs in ASL, and has investigated the acquisition of these rules in young deaf children of deaf parents. Boyes-Braem is studying the development of aspects which may be particular to the modality of the language: simultaneity of signs, the change from pantomime to sign, the development of spatial mechanisms.

BLAUBERGS, Maija S. and Thomas GOALSBY. Educational Psychology Department, University of Georgia, Athens, GA 30602. Dialect differences. English. Grade 4, 8, 12 students. 9 - 17. Recognizability of Standard versus Black English in children's writing.

Samples of writing were solicited from students in Grades 4, 8, and 12 in an integrated school system. The main question to be investigated is whether the race of the writer can be inferred from a sample of the writing. Various groups of judges (e.g. teachers, linguistics students) will be asked to decide if a paper was written by a black or a white student. Whatever the basis for such decisions, if they are accurately made, anonymity is not fully preserved. A linguistic analysis of actual differences in the sets of papers will be investigated.

BOWERMAN, Melissa F. Bureau of Child Research, 1043 Indiana, University of Kansas, Lawrence, Kansas 66044. Cognitive bases of linguistic development; implications of language development phenomena for linguistic theory. English, Finnish. 4. 1;5-4;0. 1) Cognitive and linguistic determinants of the ability to produce semantically and/or syntactically causative constructions of various kinds. 2) The nature of children's early rules for word combination, how the relational concepts involved change during development.

1) Linguists have suggested that a number of superficially simple sentence types have complex deep structures involving the embedding of two simple prepositions through the abstract semantic notion of CAUSE. In examining longitudinal data from two American and two Finnish children I have found various kinds of developmental evidence supporting these analyses. For example, sentences involving (at least) a verb, a direct object, and a directional locative particle or phrase are relatively late to emerge, often coinciding with the appearance of other sentences involving clear-cut embedding. Earlier, children apparently cannot focus simultaneously on both an action by an agent and the resulting state brought about in an object; they can express only one or the other.

2) I am exploring detailed longitudinal data from one American child for clues to the make-up and breadth of the relational categories underlying early word combinations. By tracing the combinatorial histories of individual words and comparing these, it is possible to get some idea of whether production of the early constructions involves only word-specific knowledge or broader semantic notions such as "agent precedes action." Apparently, almost from the beginning there is knowledge both of the privileges of particular lexical items and of patterns governing the semantic categories to which those words belong.

BRAUNWALD, Susan R. 2416 Nottingham Ave., Los Angeles, CA 90027. Syntax. English. 1 female. Birth - 3;0. Relationship of "toddler" syntax (1;3 - 1;9) to later "early" development.

The data studied consist of 2,941 sentences from an extensive, daily, longitudinal record of the subject's language development. The daily entries contain a complete notation of the speech event including its linguistic and non-linguistic contexts. In addition, the data include complete lexicon, compiled at monthly intervals for the first two years, 45 hours of fixed-interval tape recordings as a control, and subjective monthly summaries of her linguistic and general development.

The continuity of the gradual emergence of syntactic structure is the dominant characteristic of speech during the toddler language period. For example, before correct word order is established, the 'primitive' origins of later structures are discernible. Also, structures which emerge independently in early toddler language converge at a later period of development into more complicated syntactic forms. [Staff.]

CARTER, Anne L. Department of Psychology, University of California, Berkeley, CA 94705. Gestural and verbal pre-syntactic communication. English. 1. 1;0 - 2;0. Some processes antecedent to the development of multi-morphemic utterance.

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Detailed narrative records of the child's vocal and gestural communication have been made from videotape recordings of his behavior in 10 playgroups conducted at regular intervals and under similar conditions, and which included the presence of the mother, peers, other adults, and play materials. Analysis explicates the nature of the continuity of communicative intentions and the discontinuity of communicative forms which occur in the development from sensorimotor communication to the period of communication based predominantly on the forming of complete propositions according to rules of adult grammar. Topics include: the development of first morphemes with stable significance; early communicative patterns which persevere beyond the development of syntactic rules; redundancy and generalization in sensorimotor communication; the transformation of functional activities into indicative gestures or signals; criteria for assessing an infant's communicative intention; intensity-markers; the process whereby a parent establishes or alters the significance of infant signals; infant strategies to clarify a communication which is misunderstood by the hearer; and infant rules of discourse. [Staff.]

CHAPMAN, Robin S. Dept. of Communicative Disorder, 1975 Willow Dr., University of Wisconsin, Madison, WI 53705. Comprehension development. English. 1-1/2 - 10. The relationship between comprehension and production of ordered structures; invariant ordering of comprehension strategies; description of question development in English.

Current and planned research is primarily on the development of children's strategies for comprehending sentences prior to the point in time at which grammatical information alone is used as a cue. Subject-object relationship in simple sentences and the ordering of sentences conveyed by the conjunctions and, before, after, when, because, so, since, if, but, although, will be studied.

A study of semantic comprehension of Wh- questions has been completed.

CHEN, Teresa M. Department of Linguistics and Institute of Human Learning, University of California, Berkeley, CA 94720. Syntax and semantics. Chinese (Mandarin). 3. 2 - 4 years. Acquisition order for grammatical forms; its cognitive pre-requisites.

I am interested in the acquisition of linguistic knowledge, both grammatical and semantic. How does the child associate a given form with its semantic content? At what point of development does the child know how to use a given form in its proper context?

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Like others involved in the Berkeley Cross-linguistic Study of Language Development, I am directing my research on Chinese toward a common goal, namely, to verify Brown's claim that "The order of progression in knowledge of the first language, both semantic and grammatical, will prove to be approximately invariant across children learning the same and, at a higher level of abstraction, across children learning any language."

To achieve this goal, some controlled data would be needed in addition to the material I collected in Taiwan in the summer of 1971. Tasks developed from basic concepts or universal categories, as well as those based on grammatical features peculiar to Mandarin-Chinese, will be carried out by a small team who will visit nursery schools and homes of small children during field-trip(s) to China. Participants may include McMillan and Sandra A. Thompson (UCLA), Wendy Locke (UCSB), Gail Loewenstein (UCB) and myself.

CHROMEC, Eva. Institut fur Sprachwissenschaft, Universitat Wien, Liechtensteinstrasse 46a/1/9, 1090 Wien, Austria. Phonology, sociolinguistics. German. 6. 2 - 6. Interconnections between social and stylistic variation; is there more than one linguistic competence?

The problems we are mainly concerned with are stylistic and social variation, as well as the interconnections between these two aspects of language variation.

It is by no means clear which of the quite often radically different styles employed by his parents, siblings, and other people in his environment the child will choose for his model, nor how soon he learns to differentiate between different styles in his own speech.

We feel that the case of Viennese German, where the differences between the vernacular and the Standard language are, especially on the phonological level, often quite stunning, provides us with very interesting material for this type of research, and we hope to find out whether Viennese children have one or two underlying forms for corresponding standard and vernacular forms. Under the former assumption, a number of opaque rules would have to be learned by the child, the latter assumption would make it necessary to postulate two competences.

Six children shall be used for longitudinal studies, the results obtained there shall be re-examined with larger groups of children in nurseries and kindergartens.

CHUN, Judith Anne Fix. Department of Education, Stanford University, Stanford, CA 94305. The 'Imitation, Comprehension, Production Test' (ICP) as a measure of second language acquisition in a natural context. English/French; Spanish/English. 100. Grades K, 1, 3, 5. Cross language acquisition patterns; relationship between first-language and second-language acquisition patterns.

An ICP instrument was developed based on others used in first language studies (Fraser et al., Berko) and bilingual syntax studies (Kessler). The instrument consists of 14 minimal contrasts (morphological and syntactic): singular/plural; present/past; present/future; affirmative/negative; mass/count; possessive; subject pronouns; object pronouns; direct, indirect object; active; passive; embeddings (relatives); embeddings (word order); look + preposition. The test is currently being administered to each subject in both his first and second languages. [Staff.]

CLARK, Eve V. Committee on Linguistics, Stanford University, Stanford, CA 94305. Semantics and cognitive development. Primarily English. Many. 1;6 - 9;0 years. The interaction of semantics and cognition in the acquisition of language, and the role of non-linguistic strategies in the acquisition of word meanings.

This research is designed to investigate the child's acquisition of semantics through a detailed study of different stages in learning areas of the English lexicon. The semantic fields we have chosen differ in their internal organization and in how they are used in English (e.g. verbs, relational nouns, demonstratives, etc.). By testing children's comprehension of such terms in a variety of different contexts, we hope to identify more of the non-linguistic strategies that the child may rely on when faced with an unknown word. These studies constitute a preliminary exploration of the relation between cognitive complexity and the acquisition of word meaning in the context of spatial relations and deixis.

CLARK, Ruth, Sandy HUTCHESON and Paul VAN BUREN. Department of Linguistics, Adam Ferguson Building, University of Edinburgh, Edinburgh 8, Scotland. Syntactic development. English. 1. 1;3 - 3;6. Value of case studies; value of imitation; role of psychological variables in the learning of syntax; interaction between phonology and syntax in language acquisition.

An intensive two-year investigation is made, in the light of findings from a study of the boy's elder brother, into the strategies adopted by one child as he acquires language.

Improved equipment in the child's home makes possible the recording of anything uttered in the presence of the child's mother, a psychologist, who can simultaneously record any comments concerning situation or interpretation. Twenty-five to 30 hours per week will thus be monitored, while a weekly half-hour continuous recording will be made in the presence of a phonetician. The data will be analysed and discussed with a linguist member of the team.

Of particular interest are the presence and function of imitations and buildups in the child's speech, and their relation to prior adult models, with a view to ascertaining the relative importance, in the child's linguistic development, of attention to his own and adult utterances. In this connection, the development and use of intonation and rhythm will also be studied.

COCHRANE, Rosalind M. and Jacqueline SACHS. University of Connecticut, Storrs, CT 06268. Second language learning. English. 32. 7 and 25-35 years. Second language learning, phonological acquisition, and critical period.

The goals of the research is: 1) To study how individuals in various age groups learn new sound patterns. We hope to provide general information about the strategies people use in acquiring sound systems, and the correlates of individual differences with respect to this task. 2). To examine one aspect of Lenneberg's hypothesis that as children grow older, their broadening cognitive potential contrasts with a decline in language learning abilities (the "critical period" hypothesis).

These questions are being studied by comparing, in an experimental situation, the acquisition of new (non-English) sounds and new phonological rules. Comparisons of the learning and the ultimate performance are being made both within age groups and between age groups. In later studies, we hope to observe the acquisition of new phonological systems in a natural learning situation.

COMPTON, Arthur J. San Francisco Hearing & Speech Center, 2340 Clay St., San Francisco, CA 94115. Generative studies of the phonological systems of children. English. 25. 0;10 - 3;0 and 4 - 7 years. Relationship between normal and abnormal phonological development; Clinical applications of phonological analyses as a means of testing phonological theories; Phonological processes of sound change (universal phonology) as seen in the young child's developing sound system and phonological change, historically.

The primary objectives of this project are 1) to study the linguistic organization of the normal developing sound (phonological) system of children beginning with the onset of talking and continuing to approximately three years of age; 2) to describe the linguistic organization of the sound system giving rise to deviant speech patterns of children who have failed to develop normal speech, and 3) to investigate the clinical applications of these linguistic analyses to the diagnosis and treatment of children with severe articulatory (phonological) disorders (by tailoring individual therapy programs for each child based upon his own deviant system of speech).

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CROMER, Richard F. Medical Research Council, Developmental Psychology Unit, Drayton House, Gordon Street, London WC1, England. Grammatical acquisition. English. 7, 8, and 9 years. Linguistic universals: do they have psychological validity?

Two experiments investigated how children acquire direct and indirect objects in terms of linguistic marking. An artificial language eliminated the preposition "to," and word order was controlled. One group heard the indirect object as the marked form in the artificial language, and the other group heard the direct object as the marked form. Linguistic theory would predict that the former group would be superior in learning the artificial language. However, in two experiments, no difference was found between the two groups. Furthermore, this negative result was found to be independent of whether a child had yet achieved mastery of normal English constructions involving direct and indirect object relationships.

DAVISON, Anni. Division of Audiology and Speech Sciences, Faculty of Medicine, University of British Columbia, Vancouver, B.C. V6T 1W5 Canada. Pragmatics; linguistic play and language acquisition. French. 3.

This study examines a corpus of non-serious or "play" utterances. Of interest here is the child's acquired understanding of the conventions of language use, with particular respect to "sincerity" conditions. I show that a child typically discerns non-serious utterances by virtue of an inference which in turn depends on the situational context, the propositional content of the utterance, and the social standing of the listener. This type of inference is not made until the telegraphic stage. At the lower boundary of the spectrum, the holophrastic stage, there is no awareness of the possibility that standard constraints of conversation can be ignored, whereas at the 'fluent' stage the child initiates such actions as misnaming of object, assuming conversational conventions. Pragmatic considerations of language acquisition such as the ones in this paper, can further characterize the linguistic abilities of children at various stages of language development. To successfully acquire a language a child must not only master the syntactic and semantic rules of the target language, but more importantly gain an understanding of the conventions of language use.

DICKSON, William Patrick. SCRDT, School of Education, Stanford University, Stanford, CA 94305. Development of referential communication skills. English. 96. 3;6 - 8. Within-Ss and Between-Ss factors related to communication accuracy in referential communication.

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As a part of a series of studies of referential communication, young children are being studied in a referential communication task using the Krauss and Glucksberg paradigm. Pairs of children matched on sex, age, verbal ability, and SES tried to describe one of a set of four pictures such that another child could successfully choose that picture. The referents were systematically varied as to type, location, and context. Rather striking individual differences exist in performance which are not related to between-Ss factors. Transcripts of the interactions are now being analyzed into several content and interactional categories. Related studies of mother-child referential communication performance in Japan and the United States are also being analyzed.

EDWARDS, Derek. Park Village, University of Sussex, Falmer, Brighton, Sussex, England. Cognition and early semantic-syntactic relations. English. 3. 1;4 - 2;6/3 years. How early child language is semantically constrained by the child's understanding of the non-linguistic world; tuitional characteristics of maternal speech to children.

Early linguistic and non-linguistic communication is recorded through the one-word stage into the use of multi-word utterances. Semantic relations (relational meanings) are described as a child-specific version of a system of semantic clause-types centered on verb-types, and derived from the linguistics of Halliday, Fillmore and Chafe. This semantic system is examined in relation to Piaget's account of the child's sensory-motor knowledge of how the world works; e.g. notions of spatial locativity of objects, of agentivity of persons, etc.

The meanings of the first utterances, derived from their uses across a range of interpersonal and situational contexts, are found to be largely prefigured in early non-linguistic communicative behavior, and to be generally constrained by the structures of sensory-motor knowledge -- the acquisition of meanings being equivalent to their assimilation to sensory-motor schemes -- and constrained also by the implicitly tuitional kind of language mothers use when controlling their child's behavior. The latter involves the child's assimilation of negation, attribution and possession to a frameword of physical and interpersonal constraints on his overt behavior towards the physical world, leading to apparent "misuses" of particular expressions.

EILENBERG, E. G., D. K. OLLER, and J. ELLINGTON. Committee on Language Learning, University of Washington, Seattle, WA 98195. Semantic feature hypothesis: revisited with younger children. English.

Two experiments were conducted to test certain aspects of the semantic feature hypothesis. We were interested in whether children younger than those previously investigated interpret the marked number of a

polar adjective pair as having the meaning of the unmarked member. In both experiments, three pairs of adjectives -- "big-little," "long-short" and "wide-narrow" -- were used. The child was presented with object pairs which differed only along the specific dimension in the cases of wide-narrow and long-short. The child then listened to directions asking him to give E "the ____ one" where each member of each pair was asked for three times in random order. Controls for hand preference were also used. In Experiment I, results indicated that for all three pairs significantly more errors were made on the unmarked member. These results contradict those previously reported with older children.

Experiment II was designed to replicate the unexpected findings of Experiment I. As in Experiment I, the number of errors on big-little was smaller than the number of errors on long-short which in turn was smaller than the number of errors for wide-narrow. These results are consonant with those reported earlier. However, when preference was used as a covariate, no significant differences were found for any of the adjective pairs. [Staff.]

ENGEL, Walburga von Raffler, Judy McGRAW, Elizette da COSTA, Cindy NEFF, and Mary McKEEN. Department of Linguistics, Vanderbilt University, Nashville, TN 37203. Kinesics in relation to verbalization. English, French, German. 7 children, 5 adults. 3;9, 8;7, 9, 12;1, 13, 13, 13;2. Are kinesic systems parallel to language systems in bilingual children?

This is a pilot study and in its beginning stages. Two groups of bilingual siblings, one French-English, the other German-English, are videotaped under the following circumstances: 1) with their parents while speaking French/German 2) with their peers while speaking English and 3) among themselves while speaking whichever they choose. The videotapes are evaluated to discover 1) whether the children have two kinesic codes and 2) if so, whether these two codes always accompany the respective language, or only when the children are in an essentially monolingual situation (with their parents) and not necessarily when the bilingual children communicate among themselves. Special attention is also given to researching whether the kinesic codes can be more properly divided into 1) a code for communicating with their parents (adults) and 2) a code for peer communication.

ENTWISLE, Doris R. and Nancy E. FRASURE. Department of Social Relations, Johns Hopkins University, Baltimore, MD 21218. Children's processing of syntactic cues. English. 24. 6;0 - 9;2.

A replication of an earlier investigation by McNeill was carried out with somewhat older children. McNeill's data suggested that although semantic cues aided processing of sentences by children ages 5 to 8, syntactic cues did not. The replication, in agreement with other more recent studies, showed that children's ability to process syntactically well-formed sentences increases over the early school years. The difference between McNeill's data and later data sets probably stems from (1) unreliability owing to small samples (five children) at each age level, and (2) unreliability due to the high difficulty of sentences used for the criterion.

ERVIN-TRIPP, Susan. Institute of Human Learning, University of California, Berkeley, CA 94720. Second language learning in children. English-French, Japanese-English. Ages 4-14.

Is there a similarity between the order of development of children's comprehension of syntax and morphology in first and second language acquisition? Does the relation change with age?

Children who are native speakers of English and learn French in a French milieu were found to recapitulate certain stages in the acquisition of French that mother-tongue learners go through. In the learning of English by Japanese children we will examine: (a) structures for which there is no analogue in Japanese, (b) evidence of the conditions under which L_1 dominate in comprehension, (c) evidence for a critical period in recapitulation.

ERVIN-TRIPP, Susan and Jenny GUMPERZ. Institute of Human Learning, University of California, Berkeley, CA 94720. Speech acts and communicative strategies. English. Children 2 - 8. The psychological reality of discourse rules and speech acts at various ages.

Natural interaction between siblings and others in their communicative network will be examined for evidence of clearly definable communicative strategies at various ages. These will be tested by means of "appropriateness" judgments, comprehension of intent, and the recognition of social features signalled by the verbal realization, to see whether the structure surmised in our analysis is perceived as normative by the child.

ERVIN-TRIPP, Susan, Dan SLOBIN, and collaborators in four countries. Institute of Human Learning, University of California, Berkeley, CA 94720. Question-answering. English, Italian, Turkish, Serbo-Croation, 2 - 4. Is there a universal order of development in the comprehension of Q-words?

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When situational and linguistic context makes several answers possible, with the exception of the semantic features of the question word, is there a general, presumably cognition-based, order of development in the category-matching of the responses to the Question-words? If not, is there evidence from elsewhere in the child's grammatical system that would argue that language-specific features have delayed the child's realization of a contrast he controls in other situations? Children answer general questions in a conversation, also questions about experimental materials, with the sentence-context controlled, in identical experiments in four languages.

FANTINI, Alvino E. Foreign Language Education Center, University of Texas, Austin, TX 78751. General linguistic and sociolinguistic development. Spanish/English (passive Italian). One. Birth to 5;6. Case study of general language acquisition -- all aspects, with special emphasis on developmental sociolinguistics; one child from birth to age 5;6, bilingual in Spanish English, passive ability in Italian.

The project is a longitudinal case study of one child, examining general language acquisition from his birth to age 5;6. The child is bilingual in Spanish (the language of the home) and English (the language of the community) as well as Italian (passive knowledge only). The written diary and recorded tapes made at regular intervals over the past five years are currently being examined for information concerning the child's developing phonology, vocabulary growth, syntax and morphology, as well as from the perspective of developmental sociolinguistics. Analysis to date has placed special focus on how the child learned to differentiate language systems, his growing awareness of his own bilinguality, the social factors affecting his choice and use of each language, switching patterns, interference, and assessment of proficiency.

The sociolinguistic aspects of the child's development are the central body of a doctoral dissertation being prepared for completion by May, 1974.

FARWELL, Carol. 2343 S. W. Boundary, Portland, OR 97201. Semantic development. English. Several. One to two word stage. Development of the verb system, relationships of motion verbs and locative concepts, grammar of the one-word stage.

Using already collected data with as much contextual information as possible (that of Greenfield, Bowerman, Bloom, Leopold and others), an analysis is being made of the development of verb semantics and related categories such as tense, aspect, etc. Emphasis is on the one- and two-word stages. Particular attention is being paid to the relation of motion verbs to concepts of location and direction (including the early use of verb particles) as well as the interaction of this system with the development of aspect. This work is for a Stanford Ph.D. thesis.

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FERGUSON, Charles A., Carol FARWELL, Mel GREENLEE, Marlys MACKEN. Stanford Child Language Project, 671 Oak Grove, Suites F & O, Menlo Park, CA 94025. Phonology, acquisition of consonants. English and Spanish. 36. 1;2 - 4;0. Universals of developmental phonology; phonological strategies; perception versus production.

The research project continues previous studies of consonant development in children in relation to three major issues of phonological theory: basic units, universal hierarchy versus individual strategies, and perception versus production. The research is limited to English and Spanish fricatives and glides, and it (1) exploits data collected previously, (2) will collect new empirical data to fill gaps for comparison of perception and production in the same children and comparison of English and Spanish development, and (3) will study certain phonological processes in English and final nasal reduction in Spanish. Methods include the Shvachkin-Garnica discrimination technique, observation of spontaneous production, word imitation, and word elicitation. Previous work on the problems of phonetic transcription of child speech is being continued and a Manual of Child Phonetics is being prepared.

FISCHER, Susan D. The Salk Institute, P. O. Box 1809, San Diego, CA 92112. Syntax and morphology. American Sign Language. Both. 2;6 - 50. Linguistic universals, especially universals of cognitive versus linguistic development.

An attempt was recently made at describing verb inflections in [adult] ASL [American Sign Language]. Most recently, work describing the acquisition of those inflections by deaf children of deaf parents learning ASL as their first language is being conducted. It has been found that, although the grammar and the actual physical mechanisms of expressing the inflections are radically different from both English and spoken languages in general, the kind of errors these children make are just like the overgeneralizations we find repeatedly in hearing children learning spoken language.

FRANCIS, Hazel. Department of Education, University of Leeds, Leeds LS2 9JT, England. Structure (syntactic) and function in child speech. English. 2 - 7 years. Relationship between linguistic descriptions and modes of acquisition of spoken languages.

For very young children any valid description of speech depends on the observer's procedures for interpretation and on the function of the utterance for the child. An attempt to investigate these aspects of description is being reported and a further pilot study is under way.

An attempt is being made to find valid and reliable indices of structural complexit; in the thematic speech of children of 5 - 7 years, exploring (1) the usefulness of linguistic descriptions and (2) differences in the use of linguistic forms betwee: children from different learning backgrounds.

FRANK, Sheldon M., Doris ALLEN, and Lorrayne STEIN. Department of Psychiatry, N. Y. U. Medical Center, New York, NY. Syntactic and communicative distancing in mother-child verbal interaction. English.

Recent research, including prior work by the senior author, indicates that normal mothers engaged in verbal interaction with their normal preschool children simplify the syntactic complexity of their utterances in accordance with the age and syntactic complexity of the child. Indeed, there is seen over the child's preschool years a complex communicative feedback system with the parent in which semantic, syntactic, paralinguistic and kinesic elements can be shown and interrelationships studied.

We describe two aspects of our current studies on the relations between schizophrenia and linguistic/communicative development: 1) Mothers of schizophrenic young children aged 3 - 5 years fail to control their linguistic complexity to the complexity of the child. As seen also in current studied participated in by the senior author with the Baldwin Group, they seem to conform to the chronological rather than linguistic level of the child. 2) Mothers diagnosed as schizophrenic or having a related condition, in a pilot group, have shown a similar pattern.

Scores on several different linguistic parameters which demonstrate this pattern of syntactic and communicative distancing in the two subject groups are given, together with comparisons with data on controls. The relation of our findings to work reported in the psychiatric literature by Wynne, Goldfarb and others on communication patterns in families with schizophrenia, is discussed.

FROMKIN, Victoria A., Susan CURTISS, David RIGLER, and Marilyn RIGLER. Dept. of Linguistics, UCLA. Los Angeles, CA 90024. General language acquisition and language acquisition and hemispheric specialization. English. 1. Chron. 16. Competence/performance; universal stages; relationship between language acquisition and hemispheric specialization; production and/or comprehension; critical age hypothesis.

Continuing study of Genie, child who for 12 of first 13 1/2 years was isolated from the world psychologically, physically, and linguistically. This study is attempting to analyze and describe the stages in her acquisition of language dealing with the phonological, phonetic, syntactic, and semantic aspects of both her production and comprehension of speech. In addition, we are continuing the neurolinguistic studies concerning lateralization of language and other functions.

GARVEY, Catherine. Department of Psychology, Johns Hopkins University, Baltimore, MD 21218. Microsociolinguistic speech acts. English. 36. 3;6 - 5;9. Development of social speech; the relation of speech to the acquisition of social roles; reexamination of the concept of childhood egocentrism.

Research was based on unstructured play sessions of dyads of same-age children in three age groups ranging from 3-1/2 to 5-3/4. During 15 minute (videotaped) sessions the majority of time was spent in episodes of focused interaction. These episodes of mutually adapted behavior, often initiated by a summons-answer routine, contained verbal sequences ranging from a single exchange to 20 exchanges. Talking was a major component in a number of different kinds of interactions, which included pretend play with and without role enactment, ritual play, goal-oriented interventions, and just conversing. The structure of the rhythmic interchanges of ritual play has been described elsewhere. The present paper examines verbal interactions based on the speech act, Request. Requests for action were analyzed within a structural domain extending from preparation for the request to acknowledgement of its response. Of well-formed direct requests (mean # per dyad = 16) 77% received some acknowledgement (compliance, challenge, refusal) and 53% achieved the intended perlocutionary effect. The meanings in the domain of direct requests form the bases for interpretations of indirect requests (variants of which are described) and also provide the bases for interpretable responses.

GILBERT, John H. V. Div. of Audiology & Speech Sciences, 222 James Mather Building, University of British Columbia, Vancouver, B.C. V6T 1W5, Canada. Perception and production. English. 20/20. 2;6, 3. Vowel perception for children, Euclidian; dichotic studies with 2 and 3 year olds, abstract.

Investigation is underway to find the parameters that underlie the variation in the acoustic speech signals of young children aged 2-1/2 and 3 years to produce different phonetic vowel qualities. Phoneticians and now phonologists have experienced difficulties in discovering exactly what physical properties of the child speech signal distinguish vowels; we do not as yet know the precise acoustic basis of vowel quality in children. There must be specific properties of the acoustic signal which a listener (child) uses in identifying vowel quality

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(adult/child). We are examing the following dimensions: 1. For the children at the ages studied how many perceptual dimensions exist. 2. How do these dimensions correlate with known characteristics of vowel sounds produced by children and adults. 3. To what extent is the child's vowel perception related to his language development of those times.

"When does the left hemisphere become dominant for language function?" Investigation is underway to determine answers to the following questions: 1. Do children between the ages of 18 months and 3-1/2 years when presented with a verbal dichotic listening task, demonstrate a significant right ear advantage? 2. Is there a characteristic age related pattern to the development of lateralization between these ages? 3. Do boys perform differently in degree of direction of ear advantage than their female peers throughout the age range?

GOLUB, Lester S. College of Education, Pennsylvania State University, University Park, PA 16802. Written syntax of black, white, Indian and Spanish-American children. English, Spanish/English. Intermediate grades.

This study attempts to answer two questions: 1) How does the tabulated syntactic density of black, white, Indian, and Spanish-American children differ? 2) How does the tested linguistic ability of these children differ across the same four cultural groups? The measure for syntactic density is the tabulation of a computerized Syntactic Density Score (SDS). The measure of linguistic ability is the results of a Linguistic Ability Test (LAT). Both the SDS and LAT have been developed and validated using statistical procedures.

Results follow: Hypothesis 1: There is no difference in the written syntax of black, white, Indian, and Spanish-American children as indicated on the SDS ($p > .05$). In general this hypothesis must be accepted. The test of significance for the multivariate analysis of variance indicates no significant difference among the four ethnic groups on eleven of the SDS variables. Hypothesis 2: There is no difference in the language manipulation ability, as measured by mean scores on the LAT of these children. ($p > .05$). This hypothesis must be rejected. The complex comparison of means indicates a significant difference between the white children's linguistic awareness and the linguistic awareness of their black, Indian, and Spanish-American classmates. [Staff.]

GORDON, Alice M. Department of Psychology, University of North Carolina, Chapel Hill, NC 27514. Children's question-answering strategies. English. 24. 3;0 - 5;3.

A study was undertaken to examine the interpretation strategies used by three- to five-year-old children in answering questions beyond their linguistic competence. The children's comprehension of wh-questions was tested by having them answer questions about toys manipulated by the experimenter. The data will be analyzed to answer the following questions: (1) What is the relative difficulty of wh-questions utilizing the question words who, why, where, how, when, what? (2) Do children use the three strategies suggested by Ervin-Tripp (1970)? (3) Do children use a subject-verb-object processing strategy in interpreting questions? The data analysis is now in progress and should be finished by the middle of March, 1974.

GREENLEE, Mel and David STRECKER. Child Language Project, Stanford University and Linguistics Department, University of Michigan, Ann Arbor, Michigan. Syntax/semantics, children's production of elicited and non-elicited passives in conversation. English. Several. 3 - 13 years. Are some verbs more passivizable for children than others? Semantic and syntactic parameters of passive at different ages.

Children's spontaneous and elicited passives are being examined. Many examples of got-passives were obtained through casual conversations with children centering around daily events and the characters in a familiar story. Our elicitation techniques were able to almost double the production of passives as against the number of passives produced in free-speech without conversational elicitation. Tape-recordings of interviews show that even children as young as 4 years produced got-passives; however verbs which are passivizable for these young children may be limited to certain semantic domains.

HENZL, Vera M. Committee on Linguistics, Stanford University, Stanford, CA 94305. Morphology. Czech. 4. 1;6 - 4;0. Acquisition of gender inflection.

The intention of this research is to study the sequence of acquisition of gender in Czech children from their utterances of two-word length to those with a complete inflectional morphology of an adult-like speech. The assumptions are based on the theoretical model of the order in language development which maintains that (1) semantically defined structures are acquired prior to those defined formally, and (2) the early morphology acquisition is determined by perceptual and phonetic saliency of the inflection. In a pilot study I recorded data from two subjects at 3-month intervals and observed that in the process of language learning the child used inflectional structures of combined meanings on the basis of their semantically relevant features (e.g. possession) before that of gender (masc., femin., and neuter), and that inflection with a single gender referent (e.g. attributive adjectives,

past-tense verb forms, etc.) was more advanced than inflection with a double gender referent (e.g. possessive adjectives). In the study I also want to test experimentally whether the child's strategy is to prefer inflections which are determined by natural sex, and/or those which have a regular phonological form.

INGRAM, David. Department of Linguistics, University of British Columbia, Vancouver, B.C. V6T 1W5, Canada. Phonology. Italian, German, Polish. 6. 1;6 - 2;0. Cross-linguistic characteristics of phonological acquisition.

This is a longitudinal study of young children acquiring Italian, German and Polish as first languages. There are six subjects, two for each of the three languages. All were approximately 1-1/2 years old at the start, and are being observed weekly for a period of nine months. For each language, a research assistant fluent in the language visits each child for two hours each week in the home and makes audio recordings. The speech of each child is then transcribed into phonetic transcriptions. The resulting phonological diaries will be analyzed and compared to see what phonological processes are shared by all children.

IVIMEY, G. P. Dept. of Child Development, University of London, Institute of Education, 59, Gordon Square, London WC1, England. Phonological and syntactic development of deaf children. Deaf English. Strategies used in acquiring linguistic rules.

(A) Phonological systems of deaf children. Analysis of the phonological rules underlying the speech of deaf children, aged 8 - 12 years, severely deaf (loss greater than 80 db. threshold) and an attempt to correlate rule systems with history of auditory experience via amplifying aids.

(B) Syntactic development of deaf children. (1) Corpora of data are being obtained for severely deaf children and young adults (8 - 19 years) in response to sets of pictures that are designed to elicit various grammatical transformations. These will be analyzed in terms of consistency in order to detect presence or absence of rules. (2) Subjects will be asked in Stage II of the investigation to mark "correct" or "wrong" sentences based on their hypothesized syntactic systems, in order to test their notions of rigidity. Ancillary data should be obtained on language recognition problems here.

KAPER, Willem. Wouwermanstraat 39hs, Amsterdam-1007, the Netherlands. Syntax. Dutch. 3. 2;5-8;2, 1;7-6;0, 1;0-2;10. The acquisition of negation.

Starting from spoken sentences and taking into consideration both linguistic context and situation, some observations concerning negation in child language are studied. It is assumed that there is a fundamental difference between child language acquisition and constructing a grammar of an exotic language, because a child does not "know" or "formulate" any rules, his attention is focused on the situation. Since the source of the child's (unconscious) "knowledge" of the language is the "performance" of his environment, the study proceeds in continual comparison with the latter. The hypothesis is supported that there is no essential difference between child language and adult language: language acquisition is a process of increasing capacity for differentiation, which may very well go on when the child is grown up. The acquisition of the negation particle geen (German: kein) presents a specific difficulty to children and adults, perhaps owing to the fact that the syntactical construction in which it occurs clashes with the intuition. The most plausible explanation of the misuse of geen (in children and in adults) is contamination. There are many individual differences.

KELLEHER, Terese R. Dept. of Foreign Languages, Literature and Linguistics, University of Rochester, Rochester, NY 14627. Semantic development. English. 60. 4 - 12 years. To investigate children's interpretation of presupposition and implication and how it approximates adult meaning.

Fifteen of the youngest subjects were given 36 affirmative or negative sentences, each of which contained one of the following factive or implicative verbs: to know, to be sorry, to be happy, to remember, to forget, to manage. In addition, sentences using 'to think,' and 'to want' and 'to pretend' were presented. Each child was asked several questions regarding each sentence. Preliminary analysis of the data indicates that these 4- to 6-year-old children were able to answer correctly many of the yes/no questions which tentatively suggests that they understand presupposition and/or an implication. However, further questioning reveals that these children do not understand the meaning of presupposition and implication as adults do. Although no older children have been tested yet, it is anticipated that further investigation will reveal that only at about age 10 will children approximate the adult meaning of presupposition and implication.

KEREK, Andrew. Linguistics Program, Dept. of English, Miami University, Oxford, OH 45056. Phonology, morphophonology and morpheme structure. Hungarian. 2 years.

Limited and tentative data from the language of 2-year-old Hungarian children show a marked difference between child language and the standard "literary" language in utilization of phonological rules. As a result of widespread pronunciation-by-spelling, various assimilation and elision rules in the standard language tend not to be applied, with the effect that pronounced forms resemble morphologically explicit

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underlying forms very closely, and in many cases become identical with them. Thus the standard language clearly "under-utilizes" the rules, minimizing the derivational distance between base forms and phonetic forms. Child language, on the other hand, appears to temporarily extend and generalize the rules beyond their normal domains. Thus in Standard Hungarian, phonologically conditioned complete regressive assimilation is limited to sibilant inducers. But in child language the rule seems to be generalized to any inducer segment: meg + mosta → memmosta; meg + van → mevvan; minden + ki → mindekki, etc. Child language then "over-utilizes" existing rules, whereby the derivational distance is maximized. Interestingly, the same type of over-utilization is observable in certain regional dialects of Hungarian, and to some extent also in standard casual speech style.

KHUBCHANDANI, Lachman M. Indian Institute of Advanced Study, Simla 17 1005, India. Language acquisition in plural society. Sindhi, Hindustani, English. 2. 4;6 and 1;10. How does a child discriminate one set of speech habits from another in a bilingual speech community?

Speech behavior in plural societies, segmented by 'fluid' language identities, is marked by features -- such as hybridization in speech, grassroot 'folk' bilingualism, switching of codes -- arising from contact situations. Speakers in such plural speech communities in their everyday reality are not generally conscious of operating across language 'bourdaries.'

The investigation focuses attention on the adult and peer-group pressures and other constraints in a society which sets the attitudes of discrimination in a child's speech behavior, amidst the diversified speech patterns in multilingual environments. The study aims at understanding the acquisition of selection mechanisms by which a child designs the message for specific communicative tasks.

KITSMAN, Charles B. Psycholinguistics Program, University of Michigan, 202 South Thayer, Ann Arbor, MI 48104. Acquisition of speech registers. English. 15 - 20. Birth to 8 or 9 years. Differentiation of speech styles among young children: when these varieties begin to occur, what aspects of the social world of the child they provide evidence for, the social development of the child.

I am beginning work on my dissertation and will be studying the child's acquisition of a repertoire of speaking styles -- variously called speech registers and code-switching ability. I will be observing a number of children covering a wide age-span -- from infancy to perhaps as old as eight or nine years. My prime interest is in gathering a rich, usable body of data from which to work in building up our knowledge about the important social aspects of the child's world. My hope is that there will be some clues in the data that will allow us to discover what social relations the child is learning by his overt social behavior, the differentiation of speaking styles.

KORNFELD, J.R. and H. GOEHL. Dept. of Speech, 1908 North Park Mall, Temple University, Philadelphia, PA 19122. Phonology. English. 21. 4 - 13. Older children with 'specific w/r speech deficits' or 'infantile articulation' may be perceiving [r]-sounds according to their own (earlier) phonological system and are persevering in earlier speech behavior.

It was hypothesized that clinical subjects produce and perceive [r]-words differently from normals, by virtue of a particular feature or features that these children use to distinguish [r]-sounds from [w]-sounds, even though their own production of [r]-words sounds [w]-like to adult listeners. According to this prediction, clinical subjects should recognize their own production of [r]-words as [r]-words and not as [w]-words, and they should do so more often than normal speakers (who will tend to perceive the clinical subjects' [r]-words as [w]-ones).

Two tests were performed: Goehl and Golden (forthcoming) gave a discrimination task to older children who exhibited the same kind of [r/w] behavior as the normal 1-1/2 - 2-1/2 year-olds in the Kornfeld (1971) study. It was felt that the so-called 'clinical' subjects would perform just as well as a matched group of normal children, given a discrimination task of real versus nonsense words beginning with [r] and [w]. This was confirmed.

A further study of 21 older children with the w/r substitution, whose task it was to identify a picture of one member of a w/r minimal pair (wing/ring; white/write, etc.) and then to repeat the test item, also confirmed predictions. [Staff.]

KUCZAJ, Stan A. II. Institute of Child Development, University of Minnesota, Minneapolis, MN 55455. Children's understanding of 'front,' 'back,' and 'side.' 45. 2;6 - 4;1. Developmental stages in the acquisition of front, back, and side.

Harris and Strommen (1972) have reported that children as young as 4;9 have approximately the same notions about front, back and side that adults do. We are investigating the developmental course which the acquisition of these concepts follows, which has been relatively little studied. We designed a series of tasks to provide the following types of information: 1) whether or not child knows his own front, back, and side 2) whether or not the child knows the front, back, and side of a variety of objects which have definite front features and also

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whether or not the child knows the front, back, and side of one object-type (e.g. animates) before another object-type 3) whether or not the child can place a standard object in front of, in back of, or on the side of objects which he knows the front, back, and side of 4) whether or not the child can place an object in the given locations with reference to objects which lack front-features 5) whether a child can generalize notions of front, back, and side to novel objects 6) whether or not an understanding of one concept (front) preceeds an understanding of another concept (back). Results so far indicate that knowledge of front and back emerges simultaneously for a variety of featured object-types, and that a front-back dimensional concept is acquired, rather than understanding of front, then back. [Staff.]

KYPRIOTAKI, Lyn. Center for Visual Science and Dept. of Psychology, University of Rochester, Rochester, NY 14627. Acquisition of Aux: a comparative study. English. 12. 2 - 4. Acquisition of rule-governed behavior.

Transformational grammar makes available a formula for Aux in English: Aux $\longrightarrow$ C(m) (have + en) (be + ing) [(be + en)], which readily lends itself to a comparative description of language acquisition. Transformational grammarians would claim that once the question transformation is learned, it is immediately applicable to any configuration of Aux known in the statement form. In order to test this hypothesis and to study both the order and appearance and the development of complexity of Aux, a series of three tests were given to children. (1) A repetition task exploiting the sixteen possibilities of Aux in simple statements (2) a repetition task exploiting the sixteen possibilities in yes-no questions (3) a repetition task exploiting the sixteen configurations in negative yes-no questions (4) the complexity of the Aux in the child's natural speech was also recorded. Sentence length was varied to study the effects on short-term memory of recency versus primacy. Thus far, the study shows that 2 and 3-year-old children have sharp limits on the complexity of Aux they can reproduce correctly, with the most common difficulty (as with adults) arising from sentences in which the elements (be + ing) and (be + en) are conjoined. The view that transformations are globally mastered is not borne out by my findings. [Staff.]

LEE, Laura L. and Roy A. KOENIGSKNECHT. Dept. of Communicative Disorders, Northwestern University, 2299 Sheridan Rd., Evanston, IL 60201. Developmental language disorders (assessment). English. 200. 2;0 - 6;11. How can information on normal language acquisition be used in the clinical assessment of children with developmental language disorders?

A three-year study of assessment and treatment procedures for children with developmental language disorders, funded by USOE, has been completed at Northwestern University Speech and Language Clinics. The assessment procedure, Developmental Sentence Analysis, evaluates a child's level of syntactic development from a spontaneous language sample, giving weighted scores to a developmental progression of indefinite pronouns, personal prouns, main verbs, secondary verbs, negatives, conjunctions, questions, and wh-questions. Normative data have been statistically established on the language samples of 200 carefully selected, normally developing children between the ages of 2;0 and 6;11. Clinical use of this procedure leads to prescriptive language goals for individual clinical children and provides a way of measuring their progress throughout the period of interventional language teaching. The procedure is fully described and evaluated in Developmental Sentence Analysis by Laura L. Lee, with a chapter by Roy A. Koenigsknecht, Northwestern University Press, in press. A comparison is drawn between the cross-sectional study of Developmental Sentence Analysis and the longitudinal studies of Roger Brown and his students.

LEE, Laura L., Roy A. KOENIGSKNECHT, and Susan T. MULHERN. Dept. of Communicative Disorders, Northwestern University, 2299 Sheridan Rd., Evanston, IL 60201. Developmental language disorders (treatment). English. 30. 3 - 6. How can information on normal language acquisition be used in the clinical treatment of children with developmental language disorders?

A clinical treatment procedure for children with developmental language disorders has been studied at Northwestern University Speech and Language Clinics as part of a three-year project funded by USOE. This procedure, Interactive Language Development Teaching, presents grammatical structures to clinical children in a developmental order and in a conversational setting. It avoids the extremes of unstructured language stimulation and the rigidity of imitative drill. The verbal interaction between parent and child, which is the natural setting for language learning, is simulated clinically through story-telling, where the semantic content of grammatical structures can be emphasized. The stories are carefully written to introduce grammatical structures in a developmental progression to meet individual children's needs. Questions are interspersed to provide a conversational interchange between clinician and child, thus providing both receptive and expressive language experience. This procedure is described in Interactive Language Development Teaching by Laura L. Lee, Roy A. Koenigsknecht, and Susan T. Mulhern, Northwestern University Press, in press. Sixty language development stories are included to illustrate the procedures. The results of a three-year clinical teaching program, using the Interactive Language Development Teaching, are statistically analyzed and presented.

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LORD, Carol. Linguistics Department, UCLA, Los Angeles, CA 90024. Syntax, variations in the pattern of acquisition of negation. English. 1. 1;1 - 2;10. Developmental stages or variation in the acquisition of negation.

Data from diaries and recordings of the speech of my daughter Jennifer are being analyzed. Jennifer's earliest negative strings contain no segmental negative morphemes; rather, negative strings are consistently differentiated from segmentally identical affirmatives by intonational contours. At this early stage, Jennifer expresses negatives by producing the verb, and often the whole utterance, on an elevated pitch. Differences in intonation are also systematically used for meaning distinctions in wh-question strings, before wh-questions occur in her speech. Thus, at one period a 3-way contrast occurs on a given segmental string, with different intonational contours for affirmative, negative and wh-question readings. Although the development of S-internal negation proceeds roughly along the lines described by Bellugi (1967), Jennifer's earliest segmental negatives were of the form $\left[\left\{\begin{matrix}\text{can't}\\ \text{don't}\end{matrix}\right\} + \text{Predicate}\right]$ and $\left[\begin{matrix}\text{not}\\ \text{no}\end{matrix} + \text{Nominal}\right]$, and there were no examples of the form [Neg + S] or [S + Neg]. A categorization of Jennifer's utterances does not show the acquisition of nonexistence, rejection, and denial in that order. This suggests that the order of acquisition observed by Bloom (1970) may not be followed by all children. [Staff.]

LORENTZ, Jim. Dept. of Linguistics, University of California, Berkeley, CA 94720. Phonology. English.

I am presently interested in phonological development, particularly in the differences and similarities between normal and deviant phonological systems.

MacWHINNEY, Brian. 628-1/2 Elm, El Cerrito, California. Analogy and rule-formation in the acquisition of Hungarian plurals. Hungarian. 20. 2 - 3.

Plural elicitation questions were given to children attending a state nursery in Hungary. Experimental materials were designed to maximize the possibility of analogical plurals. If a child was not able to provide a plural on the first trial, the item was retested at a later time. The use of real objects or figurines, retest procedure, and the cooperation of a worker at the nursery made it possible to obtain a nearly complete set of plurals on 15 conventional items and 15 nonsense items. Analysis of the elicited plural is focused on the possible contribution of major strategies which might account for responses: rote-memorization, analogical formation, and rule-operation. Of these, analogical formation appears to be the least important, and rule-operation is generally superior to the other two explanations in accounting for the responses. However, a number of responses of conventional plurals seem to be due to rote-memorization. Patterns of responses are compared across children and a sequence of rule acquisition proposed. This sequence will be compared to the predictions suggested by a general model of morphological acquisition based upon processes of analysis, superimposition, and rule-formation. [Staff.]

MARATSOS, Michael P. Institute of Child Development, University of Minnesota, Minneapolis, MN 55455. Syntactic and semantic development. English. Various. 2 - 22. Preknowledge of syntactic systems; interaction of syntax and semantics; semantic lexical structures and knowledge.

Work with longitudinal following of a small group of children, including procedures to test their knowledge of systems not in use, or extension of systems in partial use, subjects (N = 3 at present) ages 2, 2, and 3 years. Investigation about to start of methodological difficulties of tasks employing acting out of sentences versus imitation plus questioning as a means of investigation (cross-sectional). Investigations in progress about children's knowledge of predicates involving factivity and non-factivity, cross-sectional. Studies in initial state concerning comprehension of doubly quantified sentences, and sentences with quantifiers and present versus missing complement clause subjects.

MENN, Lise. Linguistics Department, University of Illinois, Urbana, IL 61801. Phonology, the beginning of rule-governed language. English. 1. 1;6. The nature of rule growth.

In Sept., 1974, I will begin an intensive (12 hours tape, 20 hours observation/week plus several hours videotape/month) long-term (9 - 12 months at least) study of one child under natural conditions. I will be principally concerned with the fine structure of the origin and growth of phonological rules: what triggers rule change and how it spreads through the lexicon. I will attempt to find evidence on the emergence of various semantic items, and to discover what sorts of semantic analyses (features? chain-complexes?) are appropriate. If the subject progresses to word combinations during the period of observation, syntactic rule development will be studied.

I will make copies of films and tapes of Dr. Margaret Bullowa's data bank (MIT) available to those who wish to use them in studying the ontogenesis of communication ability, linguistic and paralinguistic. I take

this opportunity to remind my colleagues that this large, well-documented data bank consists of weekly taped-and-filmed half-hour sessions of child-family interaction, made in the home, and following each of four first-born children of "non-intellectual" middle-class families for several years from birth. For each child there are also periodic medical and psychological test reports. Fuller descriptions are available.

NOKONY, Alicia. Dept. of Linguistics, University of British Columbia, Vancouver, B. C. V6T 1W5, Canada. Phonology, syntax and semantics. Dakota-Sioux (Santee dialect). Two. 1;6 and 2;6. Testing, in a Hokan-Siouan language, generalities about first language acquisition which have drawn heavily on evidence from Indo-European languages.

If funding is made available, this study will begin in July, 1974. Tape-recorded and written material will be gathered and transcribed during a one-month period in the field with two siblings acquiring Dakota-Sioux (Santee dialect) as their first language. Dakota-Sioux is an SOV language; it has structural features for which no known principles of acquisition exist. A particular focal point will be the pronomial system -- the prefixing of the person pronouns onto the verb, the acquisition of the duals inclusive and exclusive, and the acquisition of active versus stative pronouns. Also of interest will be use of instrumental markers, morphological ordering within the word, and acquisition and use of the modal clitics.

OLLER, D. K. and James RYDLAND. Dept. of Speech and Committee on Language Learning, University of Washington, Seattle, WA 98195. Phonology. English. 25. 1;6 - 3;6. What are the inherent stress preferences of the human speech system? Little is known on this topic.

We are investigating stress pattern preferences in young children (18 - 42 months). We ask them to pronounce bisyllabic words, both English and nonsense words, where stress is either on first syllable (trochaic) or the second (iambic). Especially with nonsense words, the children have thus far tended to pronounce iambics as trochaics and to pronounce trochaics correctly. Instrumental as well as perceptual investigation of these data is underway.

PANNBACKER, Mary. Speech and Hearing Clinic, Texas Woman's University, Box 23775, TWU Station, Denton, TX 76204. Language development (grammar, semantic). English. 30. 18 - 40. Language skills of adult cleft palate speakers.

A previous study (Pannbacker 1972) of oral language skills of cleft palate adults indicated that (1) adult cleft palate speakers use shorter sentences than normal adult speakers; (2) there are no significant differences between adult cleft palate and normal speakers in sentence structure and vocabulary; (3) adult cleft palate speakers are more consistent in their language usage than normal speaking adults; and (4) for adult cleft palate speakers there is a significant relationship between intelligibility and other spoken language measures. Spriestersbach, Moll, and Morris (1964) have emphasized the heterogeneity of the cleft palate population with respect to cleft type, age, and speech, i.e., the wide individual variations that exist within this population. The research on language and articulation skills in cleft palate adults would seem to suggest that there may be differences in language skills between subgroups of the cleft palate population. This study is designed to evaluate two subject classifications (cleft type and intelligibility) in an attempt to assess the extent to which adult cleft palate speakers can be meaningfully combined in studying oral language proficiency. Moreover, this study is an attempt to explain in greater detail some possible relationships between language skills, cleft type, and intelligibility.

PANNBACKER, Mary. Speech and Hearing Clinic, Texas Woman's University, Box 23775, TWU Station, Denton, TX 76204. Written language. English. 20.

Speech pathologists, in evaluating written language, commonly use the Picture Story Language Test (Myklebust 1965). Myklebust (1965) reported that interscorer reliability for trained and untrained examiners was "excellent." However, previous training in scoring the Syntax Scale emerged as a critical factor. The individual reliability coefficients for those without training ranged from .21 to .88 and for the entire group from .65 to .98. Wilson (1969) has suggested that the normative data may be questionable. Sanders (1973) indicates that PSLT scoring is detailed and complex. Moreover, there is little or no information concerning intraexaminer reliability. This study attempts to study the stability of written language scoring. Experimental questions are: (1) how consistent is the speech pathologist in scoring the PSLT, and (2) is consistency of scoring the PSLT affected by experience. Two groups of ten individuals will be used as examiners. One group (inexperienced) will be advanced students in speech pathology, not having had previous experience in scoring the PSLT. The other group (experienced) will be speech pathologists with certification and experience in administering and scoring the Test.

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PAST, Al and Kay PAST. 2711 Geraghty Ave., Austin, TX 78757. Bilingualism and reading. Spanish and English. 1. 2;5. The possibility and effects of a preschool child learning to read two languages.

Mariana has been learning for the last five months to read English and Spanish (Glenn Doman method) as part of an effort to give her a general bilingual oral ability. Her acquisition of Spanish is hindered by the following: (1) her parents are not native Spanish speakers; (2) she plays only occasionally with Spanish speaking children and adults; (3) Spanish is spoken at home for about two hours per day. This amount of exposure is probably not enough, nor of the right kind, to impart oral competence in Spanish. It is hoped that her reading ability in Spanish will transfer to benefit her oral ability.

Presently, her command of spoken English is somewhat ahead of her peers. Her spoken Spanish is not equally fluent, though she comprehends it well. Her total reading vocabulary is about 200 words, and she can read simple books in both languages and sentences from a blackboard. Although she has not yet broken either code, her guesses upon seeing new words are based on her previous knowledge. There has been a little interference: shown one word she sometimes says its equivalent in the other language, usually correcting herself. Some transfer from written to oral Spanish is already evident (mainly vocabulary items).

PENG, Fred C. C. and Kazuko HARADA. International Christian University, 10-2, 3 chome, Osawa, Mitaka, Tokyo 181, Japan. A comparative study of child language: an investigation of Japanese & American 0 - 3-year-old babies. Japanese and English. 7. Birth - 3. Comparison and constrast of child language development and structure.

In Japan, child language has always belonged to the province of psychologists, although only a handful of them have been actively involved in it. Moreover, the subjects have more often than not been their own children. Recently, for the first time in Japan, two linguists have taken a great interest in the research for which seven babies, ranging from 7 to 16 months (as of February), of multiple nationalities, have been chosen as their subjects. They may be divided into three groups: (1) two American babies (7, 14); (2) three Japanese babies (7, 9, 16); and (3) two babies of different parenthood with the combination of American mother and Japanese father (13, 16).

The purpose of this study is to observe not only the subjects' linguistic developments but also to compare the results obtained from each group and probe into each group's exposure to the surrounding language(s). The acquisition of sounds in Japanese will be compared with that in English; word order differences in both will be observed and accounted for; and attention will be directed to the third group for the babies' possible bilinguality. The research began in Sept., 1973, and will last for about three years more.

PETERS, Ann M. Dept. of Linguistics, University of Hawaii, 1890 East-West Road, Honolulu, Hawaii 96822. A study of the beginnings of speech. 3. 1;0-1;10, 0;7, 0;8. Developmental stages from babbling to construction of 2-word sentences.

Longitudinal study of one child has been completed, and two others are in progress. The babies in the two current projects are now 11 and 14 months old (Dec., 1973) and we plan to follow them until they are constructing 2-word sentences. By April, they should both be in the 'one-word' stage. So far, our main findings are 1) discourse interaction (with adults or older children) is very important in the process of learning to make grammatical constructions as well as in learning the phonological representations of individual words. 2) The production of sequences of related one-word sentences is an important preliminary stage to the production of two-word sentences ('vertical' followed by 'horizontal' constructions). 3) Babies may imitate adult utterances as early as 7 or 8 months (and we probably have not found the beginning yet). 4) In the children we are working with, there is no discontinuity of stages; rather they overlap considerably. These stages may be described as babbling, words, vertical constructions, and horizontal constructions. All three of the children are in bidialectal or bilingual situations of some sort. [Staff]

PIKE, Ruth. Institute of Child Study, Faculty of Education, University of Toronto, 45 Walmer Rd., Toronto M5R 2X2, Ontario, Canada. Semantic development of comparative terms; psycholinguistic processing. English. 36. 5;6 - 7;6. Validation of process model of question-answering; cognitive and linguistic processes involved in answering a question; later stages in the development of more and less.

The sources of relative difficulty between questions are predicted by a four-stage process model of question-answering. The developmental changes which appear in the patterns of relative difficulty are shown to be caused by changes in the organization of the presented problem which lead to alternate representations in the first stage of processing.

Ss who comprehended more and less were queried about inequality resulting from addition and subtraction of marbles from equivalent collections. All Ss showed the same pattern of relative difficulty between problems when Ss were grouped by age or on a production test of comparative terms. When Ss were required to transform equivalent collections, performance was related to different patterns in the question task. These differences are predictable for different subjective representations of subtraction problems. No differences were found for an analogous question-answering task where the subjective coding of pictures was biased by attentional directions phrased in comparative terms.

The model provides a format for the resolution of some apparent contradictions in the results of earlier research on the development of comparatives. Further studies are planned on more and less in different contexts and the development of comprehension of direct and indirect commands.

POLITZER, Robert L., Irene CALZADA, Judith CHUN, Terry DELGADO, Edward FUENTES, Christine HEXEM, and Arnulfo RAMÍREZ. School of Education, Stanford University, Stanford, CA 94305. Second language acquisition. English/French, Spanish/English. 90. 5 - 10.

The purpose of this study is to measure second language acquisition (in children) in a natural context (that is, in a school setting in which the Ss receive no formal second language training per se, but where the second language serves as the medium of instruction). This is to be done through the administration of the following measures at periodic intervals: a highly-structured measure of grammatical contrasts (ICP test), a story retelling-translation task, a story-telling task (Dailey Language Facility Test) and the recording of spontaneous speech. Hopefully, these measures will help determine various "stages" of second language acquisition (through the use of MLU or T'unit).

The sample consists of a total of 90 Ss, ages 5 - 10, approximately half of which are native speakers of English learning French, and the other half native speakers of Spanish learning English.

It is our hope that through this research we may be able to determine specific similarities and differences between first and second language acquisition, and that these findings might lead to the preparation of classroom materials for second language teaching which are based on the natural sequence of second language acquisition. This research is funded by the Stanford University Research Development Fund.

PRESS, Margaret L. Department of Linguistics, UCLA, Los Angeles, CA 90024. Semantic features in language acquisition. English. 2 - 6 years. Semantic feature hypothesis.

This experiment was designed to collect data on children's use of semantic attributes, in order to evaluate current theories of semantic development (e.g., the semantic feature hypothesis of Eve Clark). Children (2 - 6 years) were tested individually. Each was shown a card depicting some concrete object (e.g., a pocket watch) and then shown a set of two to three additional pictures of objects (e.g., a ring, set of 5 concentric circles, a temperature gauge) -- each of which share a number of attributes with the card but also share one that the others lack. The child's task was to pick one from the set most like the card. The test was designed with no preconceived right or wrong answers and thus attempts not to measure knowledge of the adult language, but to discover something about the child's strategies in his semantic development. The children's responses have been analyzed and implications of these results, for the notion of semantic features in adult language as postulated in the current model, have been examined. [Staff.]

RAMER, Andrya L. H. 180 West End Avenue, New York, NY 10023. Early syntactic and semantic development. English. 7. 1;4 - 2;3. The universality of all aspects of language development: the question of the emergence of predicates prior to subjects.

Recent research in developmental psycholinguistics has concentrated upon the universal nature of the developmental process. This research was designed to examine for the possible emergence of differing styles in this process. Seven children were observed from a time just prior to the emergence of syntactic constructions until at least 20% of their utterances specified a Subject+Verb+Complement structure. The obtained corpora were analyzed syntactically and semantically. Syntactic analyses included order of acquisition according to grammatical complexity and specification of Subject+Verb+Complement structure in the earliest syntactic period. Obtained utterances were also analyzed for the number and type of semantic categories expressed.

The results of this research indicated that although there were many similarities among the children, two distinct styles of syntactic acquisition were present. There were specific differences in the kind of syntactic constructions employed depending upon the child's syntactic style. Syntactic style also appeared to be related to speed of acquisition and sex. The development of semantic categories appeared to be unrelated to syntactic style; however, it was related to age.

ROEPER, Tom. Department of Linguistics, South College, University of Massachusetts, Amherst, MA 01002. The acquisition of quantifiers. English. 200. 3 - 9.

We used a series of quantifier (Q) sentences that varied from simple to complex: from 'The circles are all orange' to 'Only some of the circles are not all black.' The children were given a series of pictures of circles and squares and asked to mark whatever one(s) fit the sentence. Conclusions: (1) Q's are copied and distributed throughout an S just as Neg's are in the stage before tag-questions are acquired. (2) Q's interact with each other and attract one another. If not and every occur in a sentence, they will be seen as modifying each other rather than (or prior to) adjacent nouns. (3) The transformations associated with Q's overgeneralize at a later age just as they had at an earlier age with Neg's. (4) When there are several Q's they are ordered in a right-branching sequence of modification. That is, not all is interpreted as

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all not (unless given the intonation of a single word). In sum, there are both cognitive and syntactic aspects to quantifiers. The strategies used by children are familiar and not as abstract as recent linguistic treatments would suggest. Older children deal in new forms with problems they had encountered earlier. [Staff.]

ROSENBAUM, Harvey. Southwest Regional Laboratory for Educational Research and Development, 4665 Lampson Ave., Los Alamitos, CA 90720. Semantic development. English. 180. 5 - 7.

Investigation of the development of the child's ability to comprehend the semantic relations of presupposition (as created by factive verbs) and entailment (as created by implicative verbs).

SALUS, Peter H. and Mary W. SALUS. Division of Humanities, Scarborough College, University of Toronto, West Hill, Ontario, Canada. Phonology. English, French, German, Czech, Estonian. 24. 2 - 8. Phonological rule-ordering; differences in rules and orderings in abnormal language development.

In two papers we have presented work concerning rule-ordering in normal phonological development in five languages and considered deviations from these rules and orderings in subjects seen at the Scottish Rite Institute for Childhood Aphasia. We are continuing work on abnormal development using both brain-damaged and emotionally disturbed subjects.

SCHRADER, Patricia Lancaster. 3438 Castle Rock Lane, Garland, TX 75042. Morphology. English. 80. 4 - 7. Acquisition of morphemes by 80 young children of the lower socio-economic class and comparison of results with Berko's (1958) results.

Variations in the child's learning of English Morphology. This paper presents a study modeled on Jean Berko's work (1958). In this study, however, the 80 children tested are from the lower class. Because they are from this socio-economic group, precautionary techniques are used to avoid fearfulness and to establish a pleasant rapport.

The children are tested on the acquisition of four morpheme units (plural, progressive, verb past tense, and possessive), and their answers are compared with the answers from adults in their community. The variables age, sex, race, bilingualism, and the viewing of Sesame Street are considered.

One conclusion agrees with Berko: there is no significant difference between the results of boys and of girls. In direct contrast with Berko's conclusion is the fact that the younger children from lower class families tend to conform to the adult morpheme patterns, and the older children deviate. A possible explanation for this variation is suggested

SCHWARTZ, Susan and Charles B. KITSMAN. Psycholinguistics Program, 202 South Thayer, Ann Arbor, MI 48104. Phonological development. English. 5. 1;10 - 2;5. Phonological strategies, rules, processes, and systematic variation.

We are interested in the child's phonological system and how it develops. In that regard, we will examine the explanatory power of rules, strategies and processes -- within the framework of a naturalistic study. Additionally we are looking for evidence of systematic phonetic variation -- noting the context in which all utterances occur. All the children's speech will be recorded and a narrow phonetic transcription made with care taken to check the reliability of transcriber judgments, using instrumental analysis when necessary and useful. Adult speech and a description of the nonverbal context in which the speech occurs will be recorded alongside the child's utterances.

SCOTTISH RITE INSTITUTE FOR CHILDHOOD APHASIA. Dept. of Special Education, San Francisco State University, 1600 Holloway Avenue, San Francisco, CA 94132.

I am not reporting a research project, but rather data available which people might be interested in. Since 1969 the Institute has been collecting language samples from children with language disorders. We have decided to make the data available to researchers who might be interested in analyzing the language of some of these children.

We have prepared a typescript, 390 pages long, consisting of a description of the collection procedures and text of children according to various criteria. Longitudinal samples are presented as well as samples from children having a variety of presenting problems. The $15.00 which we are charging for this typescript barely covers the cost of preparation.

SEVERSON, Roger A. Caribbean Center for Advanced Studies, Apartado 757, Carolina, Puerto Rico 00630. Clinical language assessment. English/Spanish. American/Puerto Rican. 5 - 12. Relationship of bilingualism to learning process.

Investigating relationship of language mediators to the acquisition of reading skills. Technique employed is called diagnostic teaching, where child is carefully monitored as s/he learns new material in oral and written language modes, and as rate of learning is changed as a function of changing the input and response-to-output. In unilingual

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and bilingual Puerto Rican children, we plan to examine the facilitative or interfering effects of a) having both the Spanish and English word in store as new written words are learned in either language, or b) having only one word available orally for a written word. Additionally, we are examining rate of learning in one or both languages to see if this can help in selection of optimum language for learning decoding skills. Comprehension of orally presented passages is a second measure to be related to the selection of optimum language modes in bilingual children.

SHAFER, Robert E. Dept. of English, Arizona State University, Tempe, AZ 85281. Adult evaluations of child language. English and German. Adults. Varied.

Bernstein and others have frequently reported differences in linguistic abilities between children from opposite ends of the social class spectrum. Labov has argued that studies of the rule-governed character of non-standard dialects does not present evidence for them as a "deprived," "impoverished," or "restricted" language. Halliday has proposed that the surface structure of an utterance is the formal realization of the simultaneous selection from sets of options available in three areas of meaning: 1. interpersonal purposes of communication 2. cognitive content and 3. discourse structure. Most adults rely on their intuition in evaluating both the surface structure and intended deep structure of children's utterances. Various types of utterances apparently trigger various judgments about children's social class and/or ethnic identity.

SHRIBERG, Lawrence D. Dept. of Communicative Disorders, 1975 Willow Drive, University of Wisconsin, Madison, WI 53706. Individual differences in phonological development. English. 5 - 9. Relationships between social learning concepts, dispositional constructs, and articulatory development; why do some otherwise normal children develop "errors" on only certain sounds?

263 children have been subdivided according to Crocker's (1969) model of featural acquisition. Featural development of glides versus fricatives preposes differential acoustic, physiological, and tempero-social correlates for children who have not acquired phonemes in these classes. Our contrasts include children with /r/ and glide errors only, /s/ and fricative errors only, both /r/ and /s/ errors, and matched children with no errors. We are interested in 1) correlating scores on self-report trait scales and observed socialization behaviors with articulation status, and 2) relating both spontaneous "correction" patterns and acquisition rates in programmed intervention procedures to a number of demographic, linguistic, and socialization variables. Children classified into one of the three articulatory error patterns do demonstrate between-group differences of theoretical and applied interest.

A report covering data from the first year of this three year project is in preparation.

SHUGAR, Grace Wales. Psycholinguistic Unit, Institute of Psychology, Warsaw University, ul Stawki 5/7, 00-183 Warszawa, Polska. Linguistic development as mode of action (pragmatic development). Polish. 2. 1;7 - 2;7, 2;0 - 3;0. Relation of pragmatic use of language structure to language acquisition.

This is an approach to the first language acquisition process through an analysis of the larger structure into which that process fits as part to whole. This larger structure is conceived as the entire ongoing activity of the child, which undergoes change with the incorporation of language use as a new form of action. The relation of language to activity is studied operationally in terms of utterances and episode (unit of action together with its conditioning situation). Two children (boy and girl) were observed in natural conditions for a year (data covers 1;7 to 3;0). On the basis of detailed observation records, transcribed from tapes, the behavior stream was divided into its naturally forming, simultaneously and sequentially linked, units (adaptation of Barker and Wright's method). Further analyses show interdependencies of utterance participation and behavior stream structure. Some developmental tendencies, in which speech plays a role, are postulated.

SLOBIN, Dan I., Judith R. JOHNSTON, Ljubica RADULOVIĆ, M. Ruth MILLER, Brian MacWHINNEY, Ayhan AKSU, Debra PRICHARD, Francesco ANTINUCCI. Institute of Human Learning, University of California, Berkeley, CA 94720. Marilyn VIHMAN. Committee on Linguistics, Stanford University, Stanford, CA 94305. Relations between cognitive, semantic, syntactic, and morphological development within and between languages. English, Italian, Serbo-Croatian, Turkish, Hungarian, Estonian, Mandarin.

A cross-linguistic study, conducted by Slobin with collaboration of Antinucci, Bever, Ervin-Tripp, Johnston, and Radulović, has applied diverse measures of cognitive and linguistic development to samples of 48 children each, between the ages of 2;0 and 4;8, in Turkey, Yugoslavia, Italy, and the United States. Major aims deal with relations between cognitive and linguistic development and the discovery of universal processing strategies for the acquisition of linguistic structures. A central part of the project rests on a system of coding underlying semantic intentions of child utterances, in an attempt to relate semantic intention to the emergence of surface forms for the expression of various intentions in various languages. This phase of the project, in

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addition to the 192 children referred to above, includes child speech samples in Hungarian (MacWhinney), Estonian (Vihman), Chinese (Chen), and projected studies of Navajo (Miller).

SMITH, Michael D. and C. H. OH. Dept. of Linguistics, University of Kansas, Lawrence, KS 66044. The ontogeny of relative clause formation. English. The child's evolving linguistic system as providing the sort of empirical data needed to evaluate competing grammars and to arrive at an acceptable characterization of the notion 'linguistically significant generalization.'

Within the framework of transformational theory, to date three descriptions of relative clause formation have been seriously entertained. The description first proposed postulates underlying NP-S or sentential embedding configurations as the source of relative clause types. An alternate description incorporates underlying S+S or sentential conjunct configurations. A third description analyses restrictive and nonrestrictive relative clauses as derivatives of sentential embeddings and sentential conjuncts respectively. The purpose of the present study is to demonstrate that from a developmental viewpoint the description which posits underlying sentential conjuncts (for both restrictive and nonrestrictive relatives) appears to be the more adequate of existant proposals. The discussion focuses on an experimental study specifically designed to assess what might be the developmental precursors of relative clause formation. [Staff.]

SMOCZYNSKA, Magdalena. Institute of Psychology, Jagiellonian University, ul. Manifestu Lipcowego 13, Cracow 31-110, Poland. Syntactic and semantic development. Polish. 5. Relation of syntactic patterns and semantic relations.

This study on the early development of syntax in children acquiring Polish is based on the longitudinal data of 5 children. The corpora are established for the period of 6 months from MLU ca 1.15 (first month) to MLU ca 2.30 (sixth month). Development of syntactic patterns is described in terms of semantic relations. Particular problems dealt with include: functions of early utterances, pivotlike constructions, word order, sentence external negation, replacement sequences, and constraints on sentence length. The analysis of morphology is not included.

STARK, Rachel E. Traylor Building, Room 417, Dept. of Otolaryngology, Johns Hopkins University, School of Medicine, Baltimore, MD 21218. Relationship of prelinguistic vocalization to later language learning. English. 14. 1 - 50 weeks. Is the development of prelinguistic vocalization a lawful one, and does it relate in any way to phonological or semantic development in the second year of life?

Sounds recorded on a longitudinal basis from infants of 2 to 6 weeks were classified as cry, discomfort or vegetative sounds, i.e., grunts and sighs as well as coughing, burping, sneezing, etc. Five examples of each of these 3 classes of sounds were selected randomly from the output of 3 different infants. The selection was made for each of the 3 infants at 2, 4, and 8 weeks of age. Cry, discomfort, and vegetative sounds were submitted to analysis of auditory and spectrographic features. Duration of segments, i.e., portions of an utterance bounded by background noise, and the temporal patterning of these segments, i.e., the number occurring in a series and the relative duration of segments within a series, were determined. Significant differences were found across the 3 sound classes, but not across age levels, with respect to (1) clustering of auditory and spectrographic features (2) segment duration and (3) temporal patterning. The possible relationship of these findings for vocalization development between 8 and 40 weeks of age is now being investigated.

STEFFENSEN, Margaret Siebrecht. Dept. of Linguistics, 4088 Foreign Language Building, University of Illinois, Urbana, IL 61801. Longitudinal study of language acquisition. Black English. Two. 1;6 and 1;8.

The primary objective is an accurate description of the language of young children (18-26 months) in a Black English (BE) speech community. The linguistic environments of the emerging BE features, such as the zero copula or the variant noun and verbal inflections, are studied in order to assess the degree of difference in the language patterns of children acquiring BE and those acquiring Standard English.

A limited number of structures are also examined to ascertain the effect of the physical and linguistic context on the pattern of acquisition. It is proposed that to gain significant insights into the process of acquisition, the physical context must be studied as an integral part of the child's verbal development and not used simply as a means of disambiguating his utterances. One chapter is devoted to a discussion of the child's responses to yes/no questions, as contrasted with information questions. The concept of consistent idiosyncratic variation is proposed to describe differing individual responses to a common hurdle in the acquisition of any given language.

The final chapter is a review of Carl Bereiter and Siegfried Engelmann's work (1966) Teaching disadvantaged children in the preschool, particularly their claims about the language of "culturally deprived children." This author's analysis is in direct conflict with their conclusions.

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STICK, Sheldon L., Speech and Hearing Clinic, University of Nebraska, Hassan SHARIFI, Dept. of English, University of Nebraska, and Jill MILLER, Lexington, Nebraska. Syntax; comprehension of passives, actives, singular/plural inflections, negative constructions, and the negative affix. English. 40. 42 - 66 months, in 6-month intervals. Data also on 8 children at 36 months of age.

All children were given the following directions, (after demonstrating that they could model the investigator's action): "I am going to say something that the toys can do. I want you to make the toys do what I say." Words for all test items were selected from word frequency lists that showed these were to be within the vocabulary of pre-school children. Sample sentences are: Actives 1) "The mother feeds the girl" versus "The girl feeds the mother." Passives 2) "The girl is pulled by the boy" versus "The boy is pulled by the girl." Singular/Plural 3) "The boy rides" versus "The boys ride." Negative and Negative Affix 4) "The baby is covered. The baby is uncovered. The baby is not uncovered. The baby isn't covered." Simple central tendency data was obtained at each age level and according to sex at each age level. In addition, we are now analyzing each sentence to determine if there are certain kinds of sentences within each construction that account for more errors. It is expected that this data will be beneficial when considering the nature and degree of language deficit. [Staff.]

STICK, Sheldon L., Audrey WESTON, and Hassan SHARIFI. Speech and Hearing Clinic and Dept. of English, University of Nebraska, Lincoln, NE. Semantics; the understanding of noun-verb relations by normal hearing and acoustically impaired children. English. Developmental sequence in the understanding of noun-verb relations.

40 hearing children, from grades K-3, 2 groups of children with hearing loss aged 7;6 - 8;0, and 9;6 - 10, and 10 normal high school seniors are being tested on 3 sets of sentences, some of which are anomalous. 24 nonreversible sentences containing verbs specified as action-processes (cf. Chafe 1970) either intrinsically or as a result of derivation were developed for presentation to the subjects. Each sentence is accompanied by a drawing which depicts the action described by the sentence. Subjects are told, "I'm going to say some things about this picture. I want you to tell me if what I say is right or wrong." The method of presentation for the acoustically impaired subgroup is basically the same except that the test sentences are presented visually (with sign language) as well as orally. Sample sentences are, e.g., 1) "The sun melted the snowman. The snowman melted. The sun melted." 2) "The man is cutting the paper. The man is cutting. The paper is cutting." For sample set 2, it is hypothesized that children may interpret the patient relationships as being unacceptable, and thus it is expected that sentences in 2) will present more difficulty than those in set 1), even though the test sentences in set 2) should be judged by adult speakers as acceptable. The purpose of this study is to investigate aspects of Chafe's semantic theory as they apply to children's abilities to understand particular noun-verb relations. [Staff.]

SWAIN, Merrill. Modern Language Center, Ontario Institute for Studies in Education, 252 Bloor St. West, Toronto, Ontario M5S 1V6, Canada. Code-switching and translation in bilingual first-language acquisition. French/English. Several. 2;10 - 4;6. Implications of bilingual acquisition for language acquisition research and theory.

Speech samples of several children recorded approximately every second week over a period of six to nine months will be considered. Each child had heard two languages (English and French) from birth. Two adults were present at most recording sessions; children were told that one adult spoke and understood only English and the other adult spoke and understood only French. Thus children were often required to act as the "communication" link between the two adults.

Code-switchers and translations will be considered from the following perspectives: 1) changes in ability as a function of language development, 2) linguistic processing strategies as revealed in the data, 3) semantic (cognitive) processing strategies. [Staff.]

TUNIKS, Galena. University of California at Davis. Vowel development in Russian children. Russian. 28. 1;6 - 7;6. Phonological rules are to be developed and compared with similar rules in English (Menn 1971; Ingram 1970 and 1971) in order to find elements pointing toward language universals.

Subjects were interviewed in a suburb of Leningrad. An analysis of the vowel system of each child will be compared to the adult model. A comparison of several vowel systems along the ontogenetic axis is being made to show the presence of phonological rules. Even if the youngest children of the group have 3 or 4 vowel phonemes instead of the adult 5, their quality is different from any of the adult ones. The low central unrounded vowel and the mid back rounded one seem to be 'fission products' of a lower mid central vowel, as indicated by phonological rules. Longitudinal studies in Russian (Gvozdev 1961 and Timm 1973) show parallel findings. The effect of palatalized versus nonpalatalized consonants on vowel quality is being investigated and a comparison is being made between the parallel and non-parallel positional variants of the vowel phonemes in children. Frequency of each vowel is being calculated and vulnerability to error supports the assumption that the most frequent substitutes for vowels are [ʌ] and [ə] (Olmstead 1971). [Staff.]

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TURNBULL, Bill. Dept. of Psychology, Stanford University, Stanford, CA 94305. Syntactic and semantic development. Estonian. One. 2;1 (as of 2/8/74). The preliminary focus of this research is to describe the language of a young child at various stages of his acquisition of Estonian.

During the past five months I have been collecting tape-recorded mother-child verbal interaction samples of a young child acquiring Estonian as his first language. The first recording was made when the child was 1;8 years of age, at which time a high percentage of the corpus consisted of two-word utterances. Each sample is approximately 30 minutes in length and samples have been collected at the rate of one per week. Included in each tape are copious "editorial" comments of the mother, the purpose of which is to specify the context in which an utterance or set of utterances occurred.

After transcription, the data are being analyzed in a preliminary attempt at describing the acquisition of the syntax and semantics of Estonian. Since Estonian is quite similar linguistically to Finnish, I am interested in comparing this acquisition data to Melissa Bowerman's data on the acquisition of Finnish. Finally, on the basis of this preliminary data I hope to be able to abstract particular hypotheses about the acquisition of Estonian which will then be tested with additional Estonian children.

TYACK, Dorothy. Institute for Childhood Aphasia, San Francisco State University, San Francisco, CA 94132. A child's acquisition of questions. English. 1. 2;0 - 3;0. Universality of stages in the acquisition of questions.

Stages in a child's acquisition of questions have been described by Bellugi (in press). At Stage A (28 months) Adam expressed yes/no questions by intonation, wh-questions by a limited number of routines. At Stage B there was more complexity in each of these categories. At Stage C (38 months) auxiliaries appeared in Adam's entire grammatical system; he inverted auxiliaries in yes/no questions but not in wh-questions. How universal these stages are is uncertain (Ingram and Tyack, 1973). Additional data are necessary to explore stages in question acquisition.

I am examining another child's acquisition of questions. Six sets of 225 questions each (total: 1350) were collected when he was 2;0, 2;3, 2;4, 2;7, 2;9, and 3;0. Questions were collected by the child's mother, a speech pathologist trained and experienced in transcribing child language. Each set shows different characteristics. To specify the changes that occurred I plan to consider the frequency of occurrence of different question forms, the percentage of unique questions, the order of acquisition of question forms, the occurrence of auxiliaries, and auxiliary inversion. [Staff.]

VENEZIANO, Edy P. Psychology Dept., Hebrew University, Jerusalem, Israel. Semantic development. Italian. 2. 1;2 - 1;6, 1;5 - 1;7. Influence of cognitive development on linguistic competence and production; Analysis of wish sentences in the one-word stage of language acquisition: a cognitive approach.

Study deals with analysis of one-word wish utterances. Starting with assumption that semantic intent is limited by child's cognitive understanding, an assessment of the latter emphasizing notion of causality and based on Piaget's theory, was attempted. Such evaluation provided general framework for specification of Cognitive Base Structures (CBS) supposedly underlying individual verbalizations. The relations and entities acted out and/or easily inferred from child's situational behavior served as clues to and as integral parts of the attributed CBS. Verbalizations refer to only one element of such CBS and are supposed to be the result of a "focusing" process. Analysis of verbalizations performed to answer the question of 'selectivity' (i.e. why focusing occurs on one and not another element of CBS) has revealed that verbalizations do not fall on the most available and taken-for-granted element, where availability is operationally defined in terms of $\pm$ perceptibility and $\pm$ physical contact to ego. Consistent with cognitive development of Agent notion, Agent verbalizations occur only when a change of Agent occurs and/or child is aware of alternative Agents for particular situation.

WATERSON, Natalie. Dept. of Phonetics and Linguistics, School of Oriental & African Studies, University of London, London WC1, England. Phonology. English. 1. 10-1/2 months to 2 years. That the child learns his first language by attending to what is most meaningful to him and by paying attention to the most salient features of the whole of the model and recognising patterns on the basis of these features and not in terms of contrastive segments.

Acquisition started with simple patterns for which articulatory control was very limited (mostly plosives, nasals and vowels); the gradual increase in articulatory control, utterance length, and complexity of patterns is described in seven stages and is related to degrees of auditory salience in the models.

Increase in utterance length is generally achieved in a simple way first, viz. by some form of repetition of known language material. Grossly oversimplifying, one may say that one-syllable words are followed by reduplicated monosyllables which pave the way for two-syllable words. One-word utterances are followed by reduplicated one-word utterances and two-word utterances; these are followed by an interesting abstract use of language, viz. two-word 'lists,' e.g. "mama('s) eye, dada('s) eye, Bob('s) eye, "in which one item remains constant and the other is

varied (producing much longer utterances than in everyday speech). These 'lists' are followed by 3-4 word utterances. Then came recitation of Nursery Rhymes involving even longer stretches (the child started reciting them before age 2), and after this came utterances of up to 7 words, including two-clause sentences. Nursery rhymes are learned on the basis of the most salient parts of utterances, i.e. on the same basis as speech.

WHITE, Burton L. Director, Preschool Project, Harvard Graduate School of Education, 415 Larsen Hall, Appian Way, Cambridge, MA 02138. The development of abilities in children; including linguistic abilities. English. Several hundred. 8 - 36 months. Experiential factors which influence the acquisitional process.

We have developed an instrument for assessing the receptive language capacities of children from about eight to 36 months of age. It is available if anyone would like to make use of it. And, we have been gathering a fair amount of data on the specific receptive capacities in regard to both vocabulary and grammatical structures of a variety of children.

WILHITE, Margaret. Dept. of Anthropology, Washington University, St. Louis, MO 63130. Semantic development. Cakchiquel. 75. 4 - 9. The acquisition of features in semantic development and the relationship between the acquisition of skills and the acquisition of vocabulary designating those skills.

In Guatemala, children begin to learn to weave between the ages of 4 and 9. Most weaving vocabulary is picked up at the same time. The vocabulary consists of names of loom parts, weaving processes and techniques, design terminology, etc. The same design elements are used in a number of different designs in different combinations to form designs with distinct designations. The designations are names of objects in the real world. The designs may be either abstract geometric representations of these real objects or stylized representations of them. In either case the particular combination of design elements determines the designation of the design. More than one design may be designated by the same term. The child's task is to determine which elements are criterial to the assignment of a name to a design, thus enabling a child to designate reliably those variations she has never seen before as well as those with which she is thoroughly familiar.

This study aims to analyze in depth the designs of two Guatemalan villages and the ways in which children learn to assign correct names to those designs.

WODE, H. Englisches Seminar, University of Kiel, D-23, Kiel, Olshausenstrasse 40 - 60, Germany. Second language acquisition in a natural environment. English and German. Parallelisms between L1 and L2; adequacy of linguistic theories for predicting developmental sequences in language acquisition.

Our primary interest is in second language acquisition in a natural environment, i.e. without the benefit of, or obstruction from, formal (classroom) instruction. Children's spontaneous productions show striking parallels between the developmental sequences of L1 when acquired as L1 and L2. On the one hand, the parallelisms seem to affect some structural areas more than others. On the other hand, they seem to diminish as a function of age. The languages studied are English and German both as L1 and L2.

For German as L1, we rely on longitudinal day-by-day data from two children (primary interest in intonation, beginning syntax, negation, interrogation, inversion, and auch-constructions). For English as L1, we rely on material available in print. At present, we are following several children who talk English as L1 and who acquire German as L2.

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